



Sheet 1 of 9  
Appl. No. 09/641,394; Filed: Aug 18, 2000  
Dkt No. 1481.0240000/MQL/TAD; Group Unit: 3621  
Inventors: MACHADO, Jr et al.  
Tel. No.: 202-371-2600  
For: A Method, System and Computer Program Product for  
Valuating Natural Gas Contracts Using Weather-Based  
Metrics.

1/9

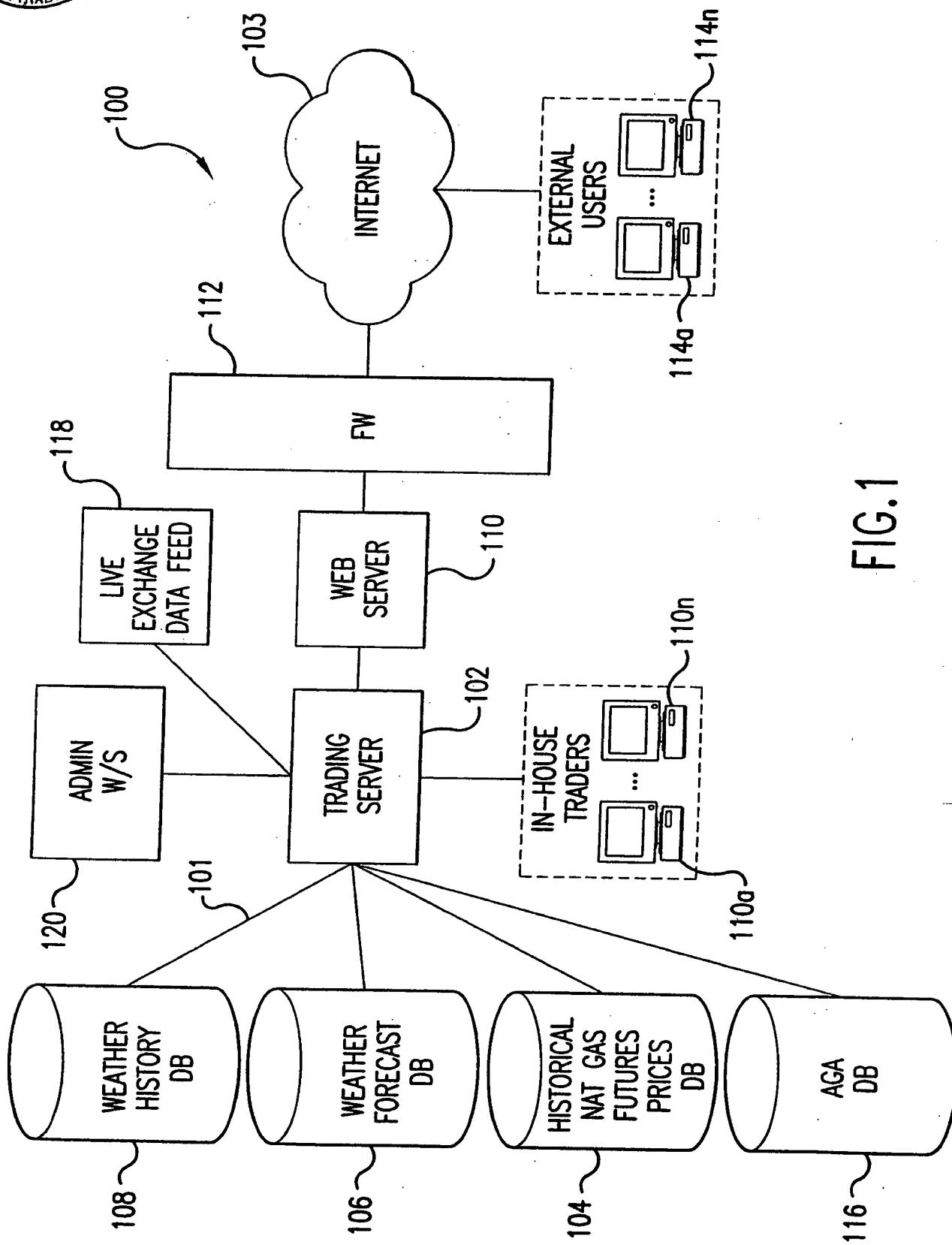


FIG. 1

2/9

WEATHER HISTORY 108

YEAR	MA	DATA TYPE	P1	P2	P3	P4	P5	P6
1994	MSA 100	TEMP.SEA	46	47	50	51	54	55
1995	MSA 100	TEMP.SEA	46	47	49	51	53	55
1994	MSA 100	SNOW.SEA	0.7	0.2	0.2	0.1	0	0.1
1995	MSA 100	SNOW.SEA	0.8	0.2	0.2	0.1	0	0
1994	MSA 100	PREC.SEA	1.01	1.03	1.08	1.1	1.12	1.1
1995	MSA 100	PREC.SEA	1.01	1.03	1.07	1.1	1.12	1.1
1994	MSA 100	SNOW	0	0	0	0	1.2	0
1995	MSA 100	SNOW	0	0	0	0	0	0
1994	MSA 100	PREC	1.5	0.4	0.9	1.3	1.7	0.3
1995	MSA 100	PREC	1.1	0.01	2.68	1.78	0.48	0.01
1994	MSA 100	TEMP	49	43	45	47	50	42
1995	MSA 100	TEMP	53	51	56	50	58	54
1994	MSA 100	TEMP.CAT	1	-1	-1	-1	-1	-1
1995	MSA 100	TEMP.CAT	1	1	0	1	-1	-1
1994	MSA 100	PREC.CAT	1	-1	-1	-1	-1	-1
1995	MSA 100	PREC.CAT	1	-1	-1	-1	-1	-1

202  
203  
204  
205

FIG.2

3/9

YEAR	MA	DATA TYPE	P1	P2	P3	P4	P5	P6
N+1	MSA 100	SNOW	0.9	0.4	0.3	0.2	1	0
N+1	MSA 100	PREC	1.1	1.05	1.02	1.00	1.15	1.2
N+1	MSA 100	TEMP	48	49	50	53	55	57
N+1	MSA 100	TEMP.CAT	1	1	1	1	1	-1
N+1	MSA 100	PREC.CAT	1	1	-1	-1	1	1
N+1	MSA 100	SNOW.CAT	1	0	0	1	0	0
N+1	MSA 100	SNOW.SEA	0.8	0.4	0.3	0.1	0	0
N+1	MSA 100	PREC.SEA	1.00	1.03	1.06	1.05	1.10	1.1
N+1	MSA 100	TEMP.SEA	47	47	49	52	54	55

302  
304

WEATHER FORECAST DATA 106

FIG.3

4/9

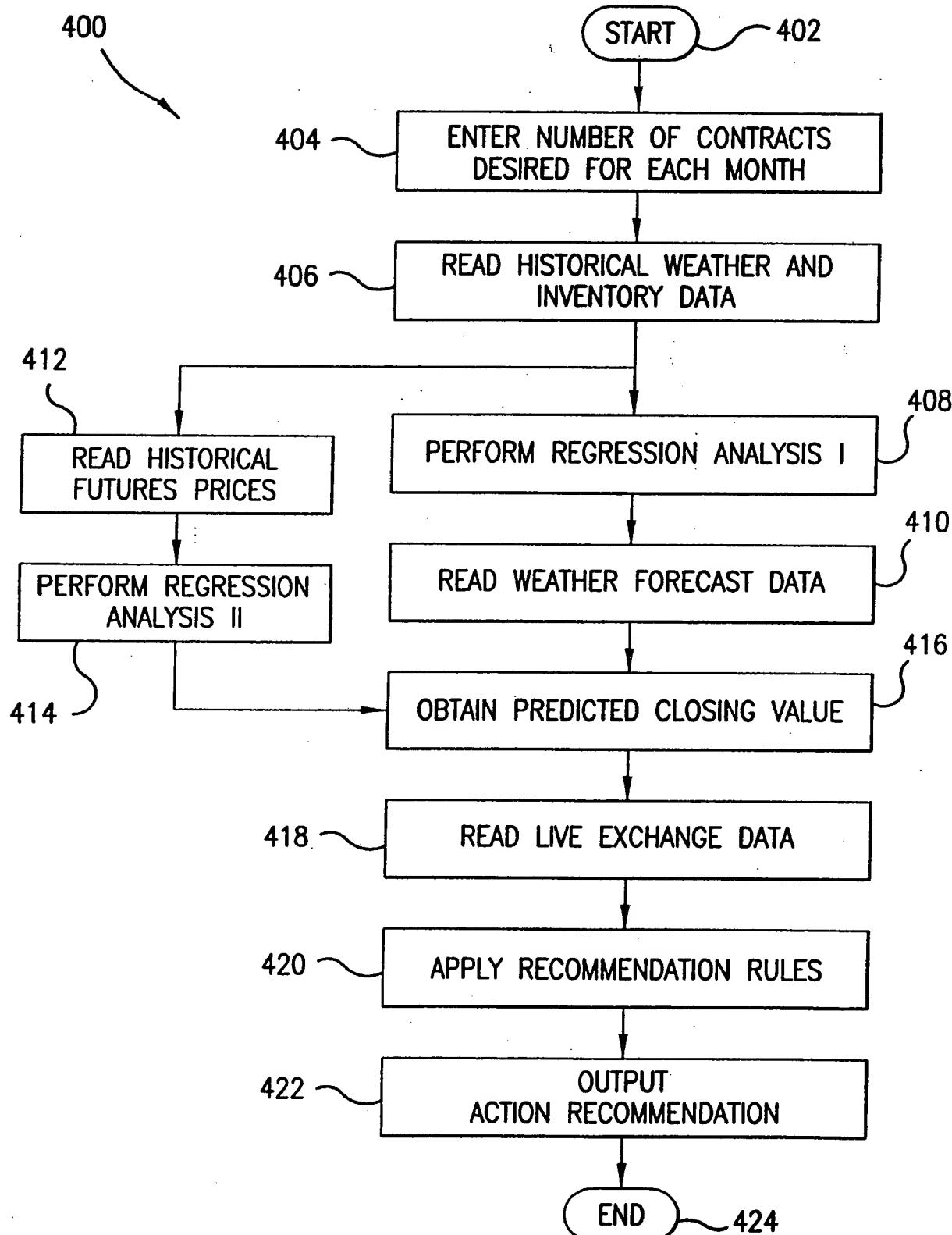


FIG. 4A

5/9

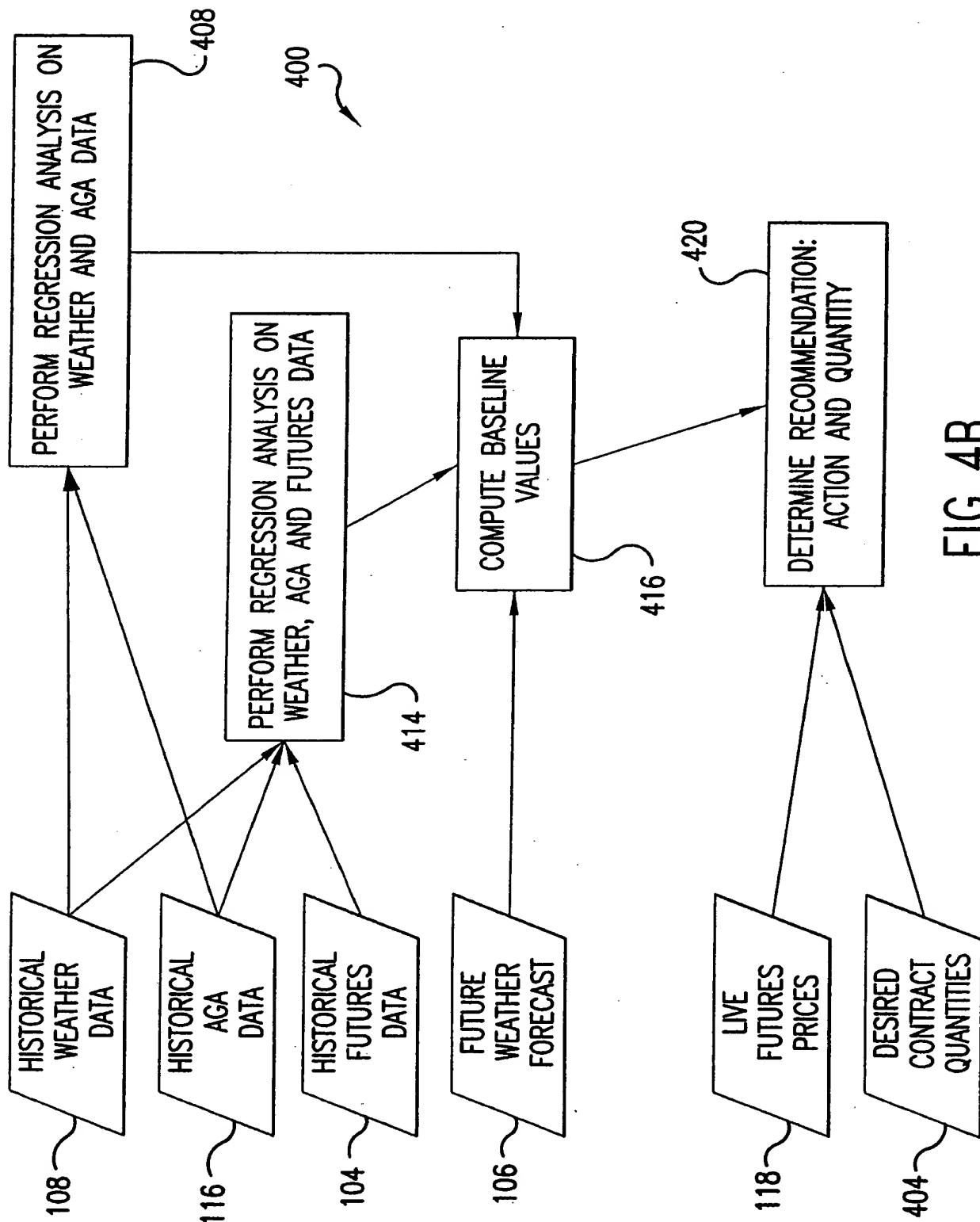


FIG. 4B

6/9

GAS BUYER	MONTH	CURRENT	CHANGE	VOLATIL	RECOMMEND	# CONTRACTS	OPTION PREMIUM	GOAL TO DATE	FUTURES INDEX	CALL	PUT	506	
												503	502
	MAR-99	1.775	-0.062	55%	STRONG FUTURES	4	0	200	155	60	95	0	0
46	APR-99	1.815	-0.051	44%	STRONG FUTURES	5	0	300	123	55	65	3	0
76	MAY-99	1.852	-0.039	37%	STRONG FUTURES	4	0	400	159	50	100	9	0
107	JUN-99	1.880	-0.031	34%	STRONG FUTURES	3	0	400	139	40	90	9	0
137	JUL-99	1.910	-0.021	32%	FUTURES	3	0	400	92	40	52	0	0
168	AUG-99	1.935	-0.020	33%	CALL 1.90	3	0.044	400	73	25	33	15	0
199	SEP-99	1.960	-0.018	32%	CALL 1.95	3	0.032	400	34	22	0	12	0
229	OCT-99	2.011	-0.012	33%	CALL 2.00	2	0.034	400	51	15	20	10	6
260	NOV-99	2.171	-0.017	32%	FUTURES	2	0	400	55	35	20	0	0
290	DEC-99	2.338	-0.013	32%	PUT 2.35	2	0.042	400	37	0	25	0	12
321	JAN-00	2.403	-0.012	32%	STRONG INDEX/SELL	2	0	400	35	0	35	0	0
352	FEB-00	2.325	-0.010	32%	INDEX/SELL	2	0	400	22	0	22	0	0

FIG. 5

7/9

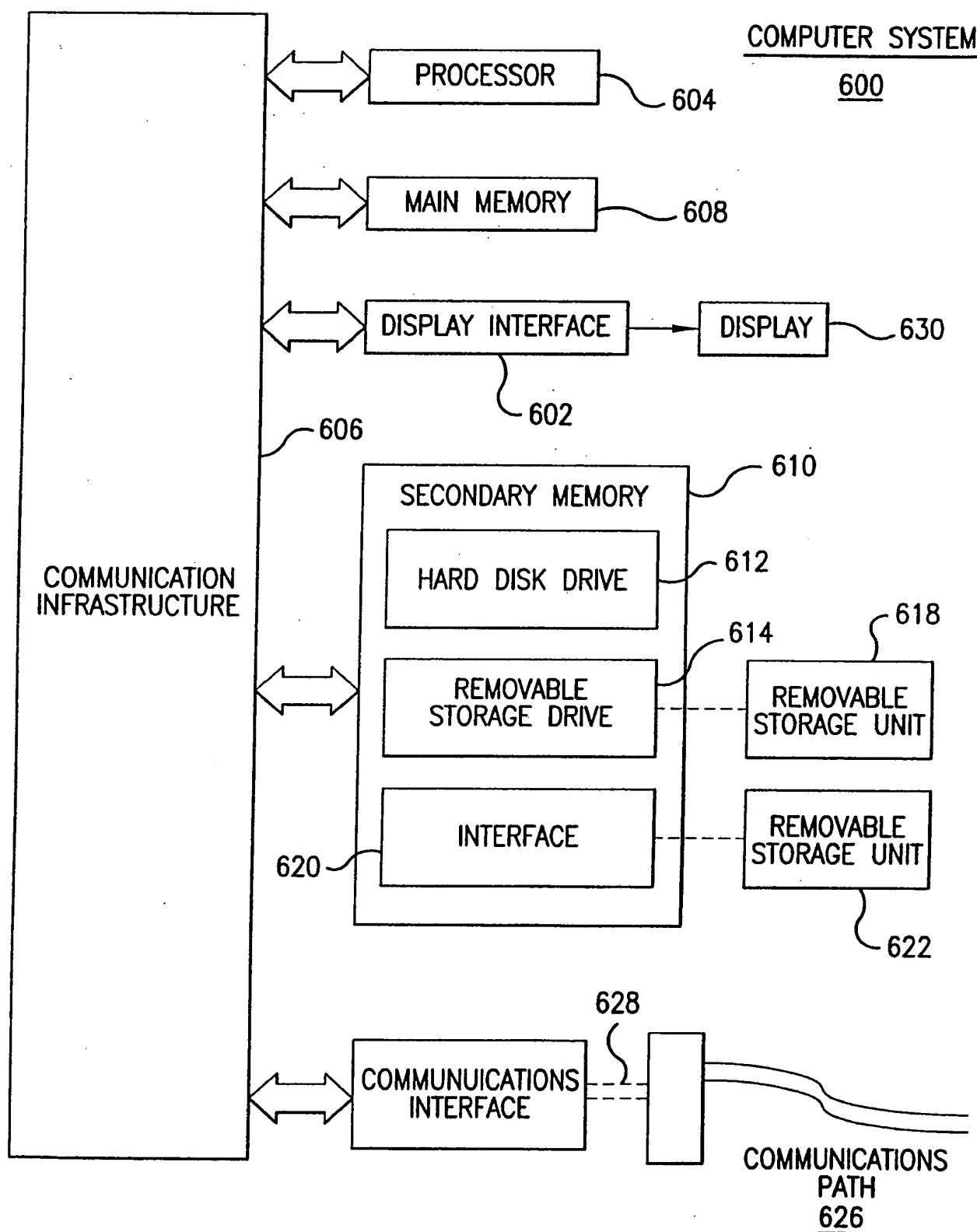


FIG.6

8/9

116

DATE	PRODUCING REGION	CONSUMING EAST REGION	CONSUMING WEST REGION	TOTAL
07-JAN-94	580	1260	363	2203
14-JAN-94	540	1125	348	2013
21-JAN-94	464	962	334	1760
28-JAN-94	430	874	321	1624
04-FEB-94	375	750	296	1421
11-FEB-94	335	636	276	1247
18-FEB-94	312	568	258	1138
		•	•	

FIG.7

9/9

104

DATE	JAN-95			FEB-95			... DEC-95		
	HIGH	LOW	CLOSE	HIGH	LOW	CLOSE	HIGH	LOW	CLOSE
12/1/1994	1.720	1.650	1.653	1.760	1.690	1.694	1.975	1.944	1.939
12/2/1994	1.690	1.620	1.635	1.730	1.660	1.678	1.965	1.950	1.943
12/5/1994	1.735	1.620	1.728	1.745	1.670	1.744	1.980	1.960	1.980
12/6/1994	1.768	1.680	1.691	1.775	1.705	1.715	1.995	1.975	1.979
12/7/1994	1.790	1.686	1.784	1.800	1.711	1.794	2.045	1.985	2.050
12/8/1994	1.865	1.756	1.847	1.870	1.790	1.861	2.070	2.050	2.051
12/9/1994	1.890	1.805	1.842	1.895	1.830	1.867	2.055	2.020	2.041
12/12/1994	1.940	1.870	1.913	1.960	1.880	1.924	2.050	2.030	2.028
12/13/1994	1.920	1.765	1.768	1.930	1.824	1.824	2.008	1.958	1.959
12/14/1994	1.770	1.690	1.714	1.800	1.710	1.728	1.965	1.955	1.957
12/15/1994	1.740	1.680	1.718	1.740	1.700	1.721	1.980	1.955	1.962

FIG. 8